

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method for producing a color filter for an image sensor comprising:

coating a photo-curable composition containing a dye, an alkali soluble resin, a polymerizable monomer and a photo initiator on a substrate directly or with another layer therebetween and then drying the same to form a coating film,

exposing a predetermined pattern on the coating film,

developing the exposed coating film with a liquid alkali developer, and

irradiating the developed coating film with ultraviolet radiation while heating at a temperature of 20°C to 50°C,

wherein the alkali soluble resin contains a molecular chain having a polymerizable double bond in the molecule.

2. (original): A method for producing the color filter for an image sensor according to claim 1, further comprising heating the coating film which has been irradiated with ultraviolet radiation at 100°C to 300°C.

3. (original): A method for producing the color filter for an image sensor according to claim 1 or 2, wherein a pixel pattern having a thickness of 3 μm or less and a pixel size of 5 μm or less is formed.

4. (currently amended): A method for producing the color filter for an image sensor according to ~~one of claims 1 to 3~~claim 1, wherein, during irradiating with ultraviolet radiation, ultraviolet radiation is irradiated on the developed coating film under heating at 25°C to 40°C.

5. (currently amended): A method for producing the color filter for an image sensor according to ~~one of claims 1 to 4~~claim 1, wherein, during irradiating with ultraviolet radiation, the wavelength of the ultraviolet radiation is from 200 to 300 nm,

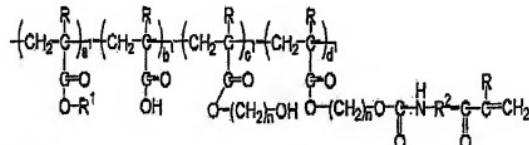
6. (currently amended): A method for producing the color filter for an image sensor according to ~~one of claims 1 to 5~~claim 1, wherein, during irradiating with ultraviolet radiation, the irradiation time of the ultraviolet radiation is from 10 to 180 sec.

7. (canceled).

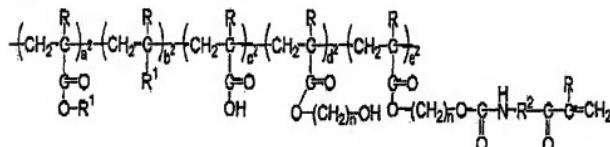
8. (currently amended): A method for producing the color filter for an image sensor according to ~~one of claims 1 to 6~~claim 1, wherein the molecular chain is present on the side chain and the molecular chain has at least one member selected from an acryloyl group, methacryloyl group, and an allyl group.

9. (currently amended): A method for producing a color filter for an image sensor according to one of claims 1 to 6~~claim 1~~, wherein the alkali soluble resin contains at least one of the (meth) acryloyl groups represented by the following formula (1-1) to formula (1 to 3):

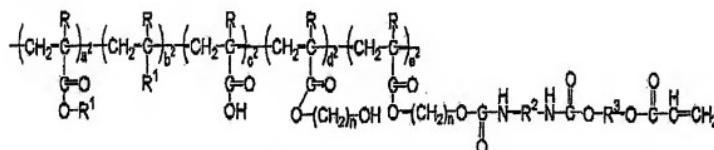
Formula (1-1)



Formula (1-2)



Formula (1-3)



wherein R represents a hydrogen atom or a methyl group, R¹ represents an alkyl group having 1 to 18 carbon atoms, a phenyl group having an alkyl group having 1 to 4 carbon atoms or an alkoxy group having 1 to 4 carbon atoms, an aryl group having 6 to 12 carbon atoms, or an aralkyl group having 7 to 12 carbon atoms, R² represents an alkylene group having 1 to 18 carbon atoms, a phenylcarbamate ester group having an alkyl group having 1 to 4 carbon atoms, or a carbamate ester group having a cycloaliphatic group having 3 to 18 carbon atoms, R³

represents a linear or branched alkylene group having 2 to 16 carbon atoms; a^1 to d^1 in formula (1-1), a^2 to e^2 in formula (1-2) , and a^2 to e^2 in formula (1-3) each represent a molar ratio (mol%) of repetitive units contained; b^1 represents from 3 to 50, c^1 represents from 3 to 40, d^1 represents from 2 to 60, and they satisfy: $a^1+b^1+c^1+d^1=100$ in formula (1-1) , and b^2 represents from 0 to 85, c^2 represents from 3 to 50, d^2 represents from 3 to 40, e^2 represents from 2 to 60, and they satisfy: $a^2+b^2+c^2-d^2+e^2=100$ in formulae (1-2) and (1-3), and n represents from 2 to 16.